

**Title:** Astronomy in the Age of Gravitational Waves

**Abstract:** The last 2 years have ushered in a new era of multi-messenger astrophysics, with the gravitational wave and electromagnetic observations of a binary neutron star merger. I will present a brief review of these observations, and the discoveries they enabled. As LIGO/Virgo are just initiated the open-alert "O3" operating period, we expect a wide range of EM opportunities for followup, and even for simultaneous sub-threshold searches. I will discuss some of the key opportunities here and scientific possibilities - ranging from the study of kilonova explosions, to the environments and origins of gravitational wave sources, to fundamental cosmology.

**Bio:** Stephen Eikenberry is a University of Florida Research Foundation Professor of Astronomy and of Physics, whose research focuses on black holes, neutron stars, and optical/infrared instrumentation to study them. He completed his undergraduate studies at MIT and his PhD at Harvard University. He was then a Sherman Fairchild Postdoctoral Prize Fellow in Physics at Caltech. Eikenberry then moved to a tenure-track assistant professorship, followed by a tenured associate professorship, at Cornell University before taking his current position at the University of Florida. As a member of the LIGO Science Collaboration, he is a co-winner of the Breakthrough Prize in Fundamental Physics and the Gruber Prize for Cosmology.